PROJECT DESCRIPTION

GENERAL

THIS PROJECT INVOLVES REMOVING THE BULBS FROM THE EXISTING TRAFFIC SIGNAL HEADS AND REPLACING THEM WITH NEW LED TRAFFIC SIGNAL MODULES AS WELL AS, REMOVAL OF EXISTING PEDESTRIAN SIGNALS AND PUSHBUTTONS (NORTHWEST QUADRANT) AND INSTALLING NEW 16 INCH LED COUNTDOWN PEDESTRIAN SIGNALS AND PUSHBUTTONS AT THE INTERSECTION OF MD 193 (UNIVERSITY BLVD) AT MD 586 (VEIRS MILL ROAD) IN MONTGOMERY COUNTY.

MD 586 IS CONSIDERED TO RUN IN AN EAST/WEST DIRECTION.

INTERSECTION OPERATION

A SYSTEM CONTROLLER HOUSED IN A BASE MOUNTED CABINET IS INSTALLED AT THIS LOCATION. THE INTERSECTION OPERATES IN A FULLY ACTUATED MODE USING 8 NEMA PHASES. THE LEFT TURN PHASES FOR THE INTERSECTION OPERATE WITH EXCLUSIVE LEFT TURN PHASING. AUDIBLE PEDESTRIAN SIGNALS ARE ON EACH LEG OF THE INTERSECTION.

SPECIAL NOTES

1. THE FOLLOWING CONTACT PERSONS FOR THIS PROJECT ARE AS FOLLOWS:

   PROJECT CONTACTS:

   MR. JEFFREY WENTZ, ASSISTANT DISTRICT ENGINEER – TRAFFIC
   PHONE: (301) 513-7318

   MR. AUGIE REBISH, ASSISTANT DISTRICT ENGINEER – UTILITY
   PHONE: (301) 513-7350

   MR. WAYNE MOWDY, ASSISTANT DISTRICT ENGINEER – MAINTENANCE
   PHONE: (301) 513-7304

   MR. RICHARD L. DAFF SR., CHIEF – TRAFFIC OPERATIONS DIVISIONS
   PHONE: (410) 787-7630

   THE POWER COMPANY REPRESENTATIVE IS:
   MR. STEVE CUSTER
   POTOMAC ELECTRIC POWER COMPANY
   8300 OLD MARLBORO PIKE
   UPPER MARLBORO, MARYLAND 20772
   PHONE: (301) 548-4333

   KAMAL HAMUD, CHIEF TRAFFIC OPERATIONS DIVISION
   PHONE: (240) 777-8761

   MR. KEITH LORD
   MONTGOMERY COUNTY
   PHONE: (301) 279-1291

   MR. EUGENE BAILEY
   SIGN SHOP
   PHONE: (410) 787-7676

2. MAINTENANCE OF TRAFFIC WILL BE HANDLED BY THE CONTRACTOR UTILIZING THE FOLLOWING STANDARD PLATES FOR TRAFFIC CONTROL: 104.00 – 30, 104.12 – 01, 104.13 – 01, 104.31 – 01, 104.32 – 01, 104.81– 02.

3. ALL UNDERGROUND AND OVERHEAD UTILITIES SHOWN ON THESE PLANS ARE SCHEMATIC ONLY AND MAY NOT BE COMPLETE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING MISS UTILITY PRIOR TO CONSTRUCTION SO THAT ALL UTILITIES MAY BE LOCATED IN THE FIELD. IF THE CONTRACTOR PERCEIVES THAT A CONFLICT BETWEEN THE UTILITIES AND THE TRAFFIC SIGNAL WILL OCCUR, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER IMMEDIATELY SO THAT THE CONFLICT MAY BE RESOLVED.

5. APS WILL FUNCTION AS FOLLOWS:

TO CROSS MD 193
   A. WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTION UNIT WILL BE "WAIT TO CROSS UNIVERSITY AT VEIRS MILL".
   B. WHEN WALK PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK, WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

TO CROSS MD 586
   A. WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTION UNIT WILL BE "WAIT TO CROSS VEIRS MILL AT UNIVERSITY".
   B. WHEN WALK PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK, WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.

EQUIPMENT LIST

A. EQUIPMENT TO BE SUPPLIED BY THE ADMINISTRATION.

CATEGORY CODE NO.	DESCRIPTION	UNITS	QUANTITY
973023	FLAT SHEET ALUMINUM SIGNS CONSISTING OF:	SF	2
	R10-3(1) (9"X15") POLE MOUNT	EA	2

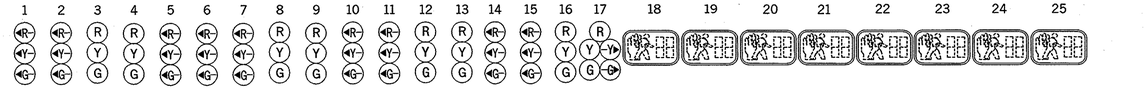
B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR.

CATEGORY CODE NO.	DESCRIPTION	UNITS	QUANTITY
203030	TEST PIT EXCAVATION	CY	1
800000	REMOVE AND DISPOSE OF EXISTING EQUIPMENT	LS	1
801004	CONCRETE FOR SIGNAL FOUNDATIONS	CY	2
801607	INSTALL SHEET ALUMINUM SIGN	SF	2
802501	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE	LF	24
805135	3 INCH SCHED. 80 PVC CONDUIT-TRENCHED	LF	21
800000	REMOVE EXISTING BULB AND INSTALL 12 IN LED VEHICULAR TRAFFIC SIGNAL MODULE	EA	53
800000	16 INCH LED COUNTDOWN PEDESTRIAN SIGNAL HEAD SECTION	EA	2
818004	10 FOOT BREAKAWAY PEDESTAL POLE	EA	2
800000	DISCONNECT, PULL BACK AND REMOVE EXISTING CABLE	LF	644
800000	AUDIBLE/ TACTILE PEDESTRIAN PUSHBUTTON AND SIGN	EA	2
861105	ELECTRICAL CABLE – 2 CONDUCTOR (NO. 14 AWG)	LF	311
861107	ELECTRICAL CABLE – 5 CONDUCTOR (NO. 14 AWG)	LF	323

C. SHA FORCES SHALL REMOVE THE CONTROLLER AND ALL AUXILLIARY EQUIPMENT FROM THE CONTROLLER CABINET. THE CABINET AND ALL OTHER MATERIALS TO BE REMOVED BY THE CONTRACTOR SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

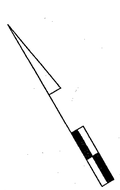
CATEGORY CODE NO.	DESCRIPTION	UNITS	QUANTITY
NONE			

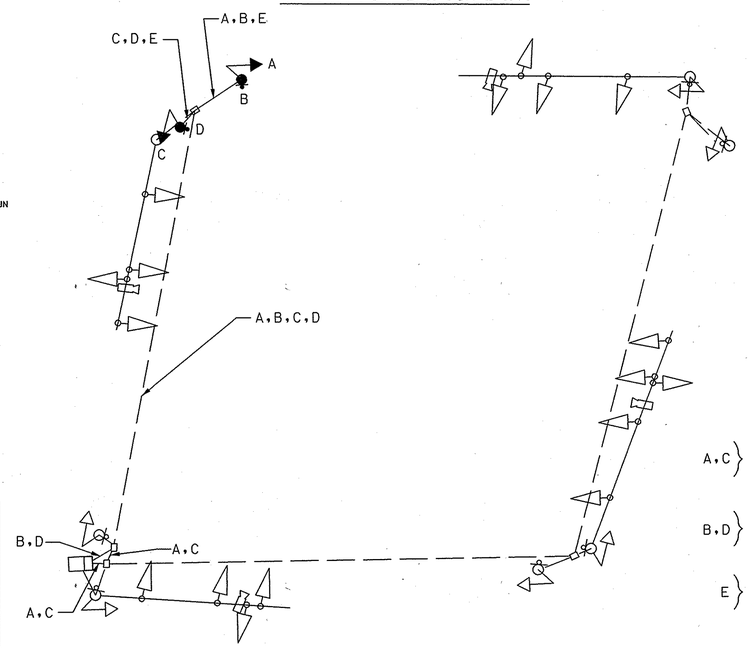
PHASE CHART



	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
PHASE 1 AND 5	←R–	←R–	R	R	←G–	←G–	←G–	G	G	←R–	←R–	R	R	←R–	←R–	R	R/G→	WK	DW	DW	WK	DW	DW	DW	DW	
PED CLEARANCE	←R–	←R–	R	R	←G–	←G–	←G–	G	G	←R–	←R–	R	R	←R–	←R–	R	R/G→	WK	DW	DW	WK	DW	DW	DW	DW	
1 AND 5 CHANGE	←R–	←R–	R	R	←Y–	←Y–	←Y–	G	G	←R–	←R–	R	R	←R–	←R–	R	R/Y→	WK	DW	DW	WK	DW	DW	DW	DW	
PHASE 2 AND 5	←R–	←R–	G	G	←R–	←R–	←R–	G	G	←R–	←R–	R	R	←R–	←R–	R	R	WK	WK	WK	WK	DW	DW	DW	DW	
PED CLEARANCE	←R–	←R–	G	G	←R–	←R–	←R–	G	G	←R–	←R–	R	R	←R–	←R–	R	R	FL/DW	FL/DW	FL/DW	FL/DW	DW	DW	DW	DW	
2 AND 5 CHANGE	←R–	←R–	Y	Y	←R–	←R–	←R–	Y	Y	←R–	←R–	R	R	←R–	←R–	R	R	DW	DW	DW	DW	DW	DW	DW	DW	
PHASE 2 AND 6	←G–	←G–	G	G	←R–	←R–	←R–	R	R	←R–	←R–	R	R	←R–	←R–	R	R	DW	WK	WK	DW	DW	DW	DW	DW	
PED CLEARANCE	←G–	←G–	G	G	←R–	←R–	←R–	R	R	←R–	←R–	R	R	←R–	←R–	R	R	DW	WK	WK	DW	DW	DW	DW	DW	
2 AND 6 CHANGE	←Y–	←Y–	G	G	←R–	←R–	←R–	R	R	←R–	←R–	R	R	←R–	←R–	R	R	DW	WK	WK	DW	DW	DW	DW	DW	
PHASE 3 AND 7	←R–	←R–	R	R	←R–	←R–	←R–	R	R	←G–	←G–	R	R	←G–	←G–	R	R	DW	DW	DW	DW	DW	DW	DW	DW	
3 AND 7 CHANGE TO 3 AND 8, 4 AND 7, OR 4 AND 8																										
PHASE 3 AND 8	←R–	←R–	R	R	←R–	←R–	←R–	R	R	←G–	←G–	G	G	←R–	←R–	R	R	DW	DW	DW	DW	DW	WK	WK	DW	
3 AND 8 CHANGE	←R–	←R–	R	R	←R–	←R–	←R–	R	R	←Y–	←Y–	G	G	←R–	←R–	R	R	DW	DW	DW	DW	DW	WK	WK	DW	
PHASE 4 AND 7	←R–	←R–	R	R	←R–	←R–	←R–	R	R	←R–	←R–	R	R	←G–	←G–	G	G	DW	DW	DW	DW	WK	DW	DW	WK	
4 AND 7 CHANGE	←R–	←R–	R	R	←R–	←R–	←R–	R	R	←R–	←R–	R	R	←Y–	←Y–	G	G	DW	DW	DW	DW	WK	DW	DW	WK	
PHASE 4 AND 8	←R–	←R–	R	R	←R–	←R–	←R–	R	R	←R–	←R–	G	G	←R–	←R–	G	G	DW	DW	DW	DW	DW	DW	DW	DW	
4 AND 8 CHANGE	←R–	←R–	R	R	←R–	←R–	←R–	R	R	←R–	←R–	Y	Y	←R–	←R–	Y	Y	DW	DW	DW	DW	DW	DW	DW	DW	
PHASE 4 AND 8 ALT	←R–	←R–	R	R	←R–	←R–	←R–	R	R	←R–	←R–	G	G	←R–	←R–	G	G	DW	DW	DW	DW	WK	WK	WK	WK	
PED CLEARANCE	←R–	←R–	R	R	←R–	←R–	←R–	R	R	←R–	←R–	G	G	←R–	←R–	G	G	DW	DW	DW	DW	FL/DW	FL/DW	FL/DW	FL/DW	
4 AND 8 ALT CHANGE	←R–	←R–	R	R	←R–	←R–	←R–	R	R	←R–	←R–	Y	Y	←R–	←R–	Y	Y	DW	DW	DW	DW	DW	DW	DW	DW	
FLASHING OPERATION	FL/R	FL/R	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	DARK	DARK	DARK	DARK	DARK	DARK	DARK	DARK	

WIRING DIAGRAM





KEY

A,C } 5-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)

B,D } 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 AWG)

E } STRANDED BARE COPPER GROUND WIRE (NO. 6 AWG)

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WBCM
ARCHITECTURE ENGINEERING CONSTRUCTION

BY: jholloway

STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION

MD 193 (UNIVERSITY BLVD) – FARRAGUT AVE TO MD 586
MD 193 (UNIVERSITY BLVD) @ MD 586 (VEIRS MILL RD)

TRAFFIC SIGNAL – GENERAL INFORMATION

SCALE NTS ADVERTISED DATE 05/02/2008 CONTRACT NO. MO578517

DESIGNED BY JEH
DRAWN BY JEH
CHECKED BY DSU
F.A.P. NO. SEE TITLE SHEET

COUNTY MONTGOMERY
LOGMILE 1501930124
TIMS NO. 1786
TOD NO.

TS NO. 222C | DRAWING SG-8 OF 8 | SHEET NO. 45 OF 45

PLOTTED: Friday, May 02, 2008 AT 12:52 PM
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